

ABSTRACT

A bypass control section (6) maintains a bypass switch (5) in the ON state during the period when a battery voltage (V_i) is higher than the output voltage (V_o) to an external load (L). Upon falling of the output voltage (V_o) at a desired voltage (E_T), a converter control section (4) starts switching control at once, and a step-up chopper (3) promptly starts boost operation. The bypass control section (6) maintains the bypass switch (5) in the ON state from the start of the boost operation of the step-up chopper (3) until the match between the battery voltage (V_i) and the output voltage (V_o).